V.A.5.N.k.56. CAREX NEBRASCENSIS SEASONALLY FLOODED HERBACEOUS ALLIANCE

Nebraska Sedge Seasonally Flooded Herbaceous Alliance

CAREX NEBRASCENSIS HERBACEOUS VEGETATION

Nebraska Sedge Herbaceous Vegetation

ELEMENT CONCEPT

GLOBAL SUMMARY: These minor wetlands occur on the western Great Plains and throughout much of the western U.S. Elevation ranges from 1000-2800 m (3300-9200 feet). Stands form open meadows that occur along the margins of streambanks, flat floodplains, and lakes often forming a band along the alluvial terrace, or on marshy areas surrounding springs and below seeps on lower hillslopes. This association is often found on well-developed soil, but occurs on a wide variety of soil types that tend to be fine-textured alluvium, or clay to organic and are typically gleyed and mottled near the surface because of the high water table most of the growing season. The vegetation is characterized by a moderately dense to dense perennial graminoid layer dominated or codominated by *Carex nebrascensis.* Other graminoid species may be present such as *Carex praegracilis, Calamagrostis stricta, Deschampsia caespitosa, Eleocharis palustris, Glyceria striata, Juncus balticus, Schoenoplectus pungens (= Scirpus pungens)*, or *Triglochin maritima*. Forb cover is generally low, but can be high in moist locations.

ENVIRONMENTAL DESCRIPTION

USFWS Wetland System: PALUSTRINE

Florissant Fossil Beds NM Environment: This herbaceous vegetation forms nearly pure, small stands only in the northeastern corner of the monument. The stands are interspersed with clumps of *Salix monticola* and may be more appropriately described as a variation of that vegetation type for the monument.

Global Environment: This wetland plant association occurs on the western Great Plains and throughout much of the western U.S. Elevation ranges from 1000-2800 m (3300-9200 feet). Stands form open meadows that occur along the margins of streambanks, flat floodplains, and lakes often forming a band along the alluvial terrace. Stands have also been sampled from marshy areas surrounding springs and below seeps on lower hillslopes. This association is often found on well-developed soil, but occurs on a wide variety of soil types ranging from saturated organics to Mollisols to Entisols. Soils tend to be fine-textured alluvium, ranging from sandy, silty loam, clay loam, or clay to organic and are typically gleyed and mottled near the surface because of the high water table most of the growing season.

VEGETATION DESCRIPTION

Florissant Fossil Beds NM Vegetation: This herbaceous vegetation is characterized by tall *Carex nebrascensis* (from 0.5–1.0 m in height) growing in flowing water from 3–12 cm deep. The stands or patches are small, less than 200 m^2, and very dense, with approximately 105% vegetation cover including the overstory shrub cover. The small stands occupied the entire, open drainage bottom and also grew under *Salix monticola* and *Salix brachycarpa* shrubs (approximately 20% vegetative cover). The most abundant associated herbaceous species were *Calamagrostis canadensis* (approximately 4% vegetative cover), *Heracleum maximum, Mentha arvensis,* and the exotic forb *Cirsium arvense* (approximately 5% vegetative cover in the aggregate). The ground cover was in excess of 90% for litter, and the remainder was flowing water exposed in a narrow channel, approximately 1 m wide. The sampled stand has become established adjacent to the foot of a steep cutbank, approximately 3 m in height.

This type is rare within the monument and has an aerial photo signature that is nearly black on true color aerial photography in the narrow drainage occupied. This sedge is perhaps better described within the variation of *Salix monticola /* Mesic Graminoids Shrubland (CEGL002659).

Global Vegetation: These wetlands are characterized by a moderately dense to dense perennial graminoid layer dominated or codominated by *Carex nebrascensis* (25-99% cover), that generally forms small- to medium-sized meadows. Stands often are nearly pure *Carex nebrascensis*, but a variety of other graminoid species may be present such as *Carex praegracilis, Calamagrostis stricta, Calamagrostis canadensis, Deschampsia caespitosa, Eleocharis palustris, Glyceria striata, Juncus balticus, Schoenoplectus pungens (= Scirpus pungens)*, or *Triglochin maritima*. Forb cover is generally low, but can be high in moist locations. Common forbs include *Eurybia integrifolia (= Aster integrifolius), Geum macrophyllum, Mentha arvensis, Mimulus glabratus*, *Heracleum maximum,* and *Ranunculus cymbalaria*. Introduced species *Poa pratensis, Poa palustris*, *Cirsium arvense,* and *Melilotus officinalis* may also be common.

In Nebraska, common species include *Agrostis stolonifera, Carex hystricina, Carex pellita (= Carex lanuginosa), Eleocharis erythropoda, Equisetum* spp., *Juncus balticus, Schoenoplectus pungens (= Scirpus pungens)*, and *Triglochin* spp. (Steinauer and Rolfsmeier 2000).

Global Dynamics: In Montana, the *Carex nebrascensis* Community Type is considered a grazing-disclimax. Under season-long grazing, *Carex nebrascensis* increases in abundance, replacing former dominant species (Hansen et al. 1995). However, under extreme grazing conditions and a resulting drop in the water table, *Juncus balticus* or *Poa pratensis* can eventually replace *Carex nebrascensis*. In Nevada, sites dominated by *Carex nebrascensis* are considered the Potential Natural Community (Manning and Padgett 1995), which appears to be the case in undisturbed stands in Colorado.

MOST ABUNDANT SPECIES

Florissant Fossil Beds NM

Stratum	Species
Graminoid	*Carex nebrascensis, Calamagrostis canadensis*

Global

Stratum	Species
Graminoid	*Carex nebrascensis*

CHARACTERISTIC SPECIES

Florissant Fossil Beds NM

Stratum	Species
Graminoid	*Carex nebrascensis, Calamagrostis Canadensis*

Global

Stratum	Species
Graminoid	*Carex nebrascensis*

OTHER NOTEWORTHY SPECIES

Florissant Fossil Beds NM

Global

Stratum	Species

GLOBAL SIMILAR ASSOCIATIONS:

SYNONYMY:

- DRISCOLL FORMATION CODE:V.C.6.a. (Driscoll et al. 1984) B
- *Carex nebrascensis* (Bourgeron and Engelking 1994) =
- *Carex nebrascensis-Catabrosa aquatica-Juncus arcticus ssp. ater* Spring Wetland (Baker 1982b) =
- *Carex nebrascensis* Association (Cooper and Cottrell 1990) =
- Wet Meadow (Hall 1973) B
- *Carex nebrascensis* Community Type (Hall and Hansen 1997)
- *Carex nebrascensis* Community Type (Hansen et al. 1995)
- Nebraska Sedge (*Carex nebrascensis*) Community (Jones and Walford 1995) =
- *Carex nebrascensis* Herbaceous Vegetation (Kittel et al. 1994)
- *Carex nebrascensis* Herbaceous Vegetation (Kittel et al. 1996)
- *Carex nebrascensis* Herbaceous Vegetation (Kittel et al. 1999) =
- Nebraska Sedge Community Type (Kovalchik 1987) =
- *Carex nebrascensis* Community Type (Manning and Padgett 1995) =
- *Carex nebrascensis* Herbaceous Vegetation (Marriott and Faber-Langendoen 2000) =
- *Carex nebrascensis* Community Type (Padgett et al. 1988b)
- *Carex nebrascensis* Community Type (Padgett et al. 1989) =
- *Carex nebrascensis* Community Type (Youngblood et al. 1985a) =
- *Carex nebrascensis* Community Type (Youngblood et al. 1985b)

GLOBAL STATUS AND CLASSIFICATION COMMENTS

Global Conservation Status Rank: G4.

Global Classification Comments: In the Black Hills, classification of stands was problematic due to identification problems with *Carex nebrascensis* and *Carex aquatilis*. The two are difficult to distinguish based on available keys and written descriptions (Marriott and Faber-Langendoen 2000).

ELEMENT DISTRIBUTION

Florissant Fossil Beds NM Range: *Carex nebrascensis* Herbaceous Vegetation is best represented along the trail that leads to the northeastern corner of the monument. The purest stand occurs at the foot bridge crossing of the unnamed creek.

Global Range: This sedge meadow type is widely distributed from the western Great Plains into the western mountains of the United States, ranging from South Dakota and Montana to possibly as far west as Washington, south to California and east to New Mexico.

Nations: US
States/Provinces: AZ CA CO ID MT NE NM? NV OR SD UT WA? WY

ELEMENT SOURCES

Florissant Fossil Beds NM Inventory Notes: Present as very small stands.
Classification Confidence: 1 **Identifier:** CEGL001813
REFERENCES: Baker 1982b, Bourgeron and Engelking 1994, Cooper and Cottrell 1990, Driscoll et al. 1984, Hall 1973, Hall and Hansen 1997, Hansen et al. 1988b, Hansen et al. 1991, Hansen et al. 1995, Jones 1992b, Jones and Walford 1995, Kittel et al. 1994, Kittel et al. 1996, Kittel et al. 1999, Kovalchik 1987, Manning and Padgett 1995, Marriott and Faber-Langendoen 2000, Mutz and Queiroz 1983, Padgett et al. 1988b, Padgett et al. 1989, Steinauer and Rolfsmeier 2000, Youngblood et al. 1985a, Youngblood et al. 1985b